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ABSTRACT

This paper describes data collection procedures for the part of the New York City Infant Day Care Study concerned with day care environment and caregiver-child interaction. This study is a 5-year, longitudinal investigation in which infants in group and family day care programs and infants reared at home are compared. Study data will be collected from two major sources: (1) observation of each child in his/her usual day care environment (at 6-month intervals), and (2) interviews with the child's caregiver(s) (once a year). The systematic observation and recording of aspects of the behavior of both the child and the caregiver are described as they occur during a typical day of observation. The child, rather than the caregiver, is the major focus of observation. An annual interview with the caregiver is also described. Both longitudinal and cross-sectional comparisons of the data will be made at three levels of analysis: the global assessment (a superordinate score provided by the Infant Day Care Environment Index--IDCEI), the subscales which comprise the IDCEI, and specific hypotheses. (ED)

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OBSERVING AND ASSESSING INFANT DAY CARE ENVIRONMENT

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Proponents and opponents of day care for young children often speak of day care as if it were a 1-of-a-piece, a unitary experience to be lauded or reviled. Yet we all know there is an enormous range in the kind and quality of formal and informal arrangements made for the care of young children. The question is, what difference do these variations make? It is our hope that the study reported here can provide data that will advance understanding of the significance of such variations in infant day care, and will enable future studies to pose the questions more sharply. As Lucille Rosenbluth has pointed out, the main focus of the study is on differences in the children that can be attributed to differences in the quality of care received by the three groups of children -- those in group day care, those in family day care, and those cared for at home. The objective we have set is to assess the salient characteristics of the environments in which the children are cared for. (I should like to note that the general approach and the specific measures have been developed in collaboration with Barbara Dawson, Mark Golden and Lucille Rosenbluth.)

In devising schemes to provide data bearing on this broad question, we have been constrained by several factors. The size and scope of the study preclude a truly fine-grained analysis of the settings. We have had to make choices, to limit the amount of data on each child and each setting. Any large scale study has to struggle with limiting the data collected to an amount that can practically be integrated and analyzed.

One constraint, however, is peculiar to studies like this one which compare the impact of different kinds of environments: The dimensions of data collection have to be equally applicable to the range of environments studied. This means that our variables have to be suited to both the group and the family day care situations. We could not, for example, use methods constructed specifically for assessing school situations, nor those designed for home

observation. Further, observations of child-caregiver interactions have to take account of the fact that in family day care there is one caregiver, whereas in group centers, there are multiple caregivers. (We do characterize the behavior of all caregivers in the group center, and do record the adult-child ratio.)

Data on the day care environment and caregiver-child interaction are obtained at five different times, when the children are 6, 12, 18, 24 and 30 months old. In addition, comparable data are being collected on children who are not in day care programs but are "at-home" with their own mothers, at two different ages -- when children are 6 months old and 18 months old. These are cross-sectional rather than longitudinal data, and will enable us to make three-way comparisons at these two ages, that is, comparisons of group and family day care, and home rearing. (No program data are collected when the children are 36 months old. Data on the three year olds are considered to be in a different category: the three year olds are graduating from infant day care and it is assumed that the assessment of developmental status at that time reflects the cumulative impact of their experiences in day care, and at home.)

Study data about the day care environments come from two major sources: (1) observation of each child in his or her usual day care environment, and (2) interviews with the child's caregiver. The observation and interview data are obtained by staff we call the Field Team. The staff is all female, since it turned out to be impractical to have young men making visits to the family day care homes. The staff is of mixed ethnic composition; Spanish-speaking children and caregivers are, however, always seen and interviewed by staff fluent in both Spanish and English.

Any study is only as good as the quality of the data on which it is based. And the quality of the data depends not only on the adequacy of the formal schemes for data collection, but largely on the sensitivity, patience and commitment of the staff who collect the data. And in this study we have been especially fortunate.

Prior to actual data collection, each Field Worker makes an orientation visit to each Center and family day care home. The study is carefully explained to the Caregivers. The Field Worker becomes the liaison person for that Center or home, and she returns for repeated observations. When it is time to schedule an observation, the Field Worker always contacts the caregiver. No surprise visits are made -- the caregiver always knows when the observer will be coming.

Observing ongoing interaction in classroom or home, the observer is an outsider, and as is well known, even in observations of physical phenomena, the observer disturbs the very processes he/she is observing. There is no way around this, except that one has to try to take it into account, and attempt to minimize the amount of disturbance. The Caregiver is told at the Orientation Visit, before any observations are made, that the Field Worker will take a neutral stance, she will not interfere in anything that happens, she has no supervisory or evaluative function, no reports will be made to agency staff, she will be passive, nonreactive. It takes time for that to be believed, but the Field Team report that after a certain amount of time, the caregivers are relaxed and do not alter their behavior, do not screen their actions. The children too, seem to adapt to the peculiar noninteractive role of the observer. Those who at first come up to the observers with comments and requests and seem to expect a (perhaps normal amount of) interaction, after a while ignore the observer; while those who are at

first overly shy and seem to try to avoid her, are, after a while, able to function naturally in her presence.

Observation of the caregiver does not cover all aspects of her functioning. We only try to characterize the caregiver in terms of her interaction with the (sample) child; we follow the child, not the caregiver. It is quite possible that the sample child is indeed influenced by the caregiver's interactions with other children. But this is one of the ways in which the scope of the study has been delimited: our focus is on the child's experience in the day care environment.

What happens in a typical day?

The observer comes at about 9:30 in the morning. The day is spent in systematic observation and recording of aspects of the child's and the caregiver's behavior.

1. First, the observers keep a Time Line, which is a record of the major events/activities of the day (time of arrival, naps, time outside the usual day care setting for outdoor play, visits, shopping, meal time, departure).
2. The CORE observation - Core is not an acronym but refers to the fact that this observation scheme is designed to be applicable to the range of ages studied and to the children's experience in the different day care environments. It is a time sampling technique, in which 30-seconds of observation is followed by 60-seconds of coding. Inter-observer reliability on the CORE technique is quite high. A sample of 60 children from 6 to 36 months old, was observed by pairs of observers (each field team member paired with every other observer, with each pair jointly observing 10 children). Kappa reliability coefficients range from .73 to .98

Seven consecutive observation coding units - which takes 10½ minutes to complete - make one CORE sample. Each observer obtains two CORE samples in the morning, two in the afternoon, and one at the noon meal. Thus, the observers obtain five CORE samples in one day's observation.

The CORE observation covers such facts as: What is the child doing? Is he or she vocalizing, and if so, is the speech intelligible, unintelligible? Is the child engaged in social activity, and if so, with whom (teacher, other adult, group, peers, pets)? What is the situation being observed (feeding, toileting, cleaning, dressing or is it a non-routine situation)? Is the Caregiver involved in direct teaching activity: is she giving information, teaching language skills, games, social rules.....? Or, is she involved in non-didactic teaching activity: reading to the child, conversing, playing with the child or participating in a game; singing with the child? Does she comfort the child when the child is distressed? Give affection when the child is not distressed?

3. The observation taken during the noon meal focuses on additional aspects of interaction specific to the feeding/eating situation: do the Caregiver and child interact with each other? Does the meal time seem to be a satisfying experience? Is the atmosphere pleasant or unpleasant? Does the Caregiver use the lunch situation as an enriching experience? Is she responsive to the child's cues? The mealtime observation also provides basic information about the child's nutrition

4. The observer also notes aspects of the physical setting, the materials and equipment available to the child. She checks on the adequacy of the playspace, the type(s) of play material, the

sleeping arrangements, bathroom and diapering facilities, and the presence of safety hazards. And this is done for each observation day, not just the first time the observer goes to the home or Center. Parenthetically, we might note that equipment and materials are not all that stable - one time there may be lots of toys, the next time very few.

5. More detailed assessment of the interaction between Caregiver and child is focused on three major areas: Learning, Control and Language. The observers base these assessments on longer observation periods than the brief time-sampling of the CORE observation, and they therefore can take account of more extended interactions between Caregiver and child.

When Caregiver and child are engaged in a learning interaction, the observer notes whether they are in one to one relation, or in a group; what is the activity, who chose it? What kinds of teaching techniques does the Caregiver use? What kinds of motivational techniques? How much interest and involvement does the child show? What is the child's affect? The Caregiver's affect? How responsive is the Caregiver to the child's cues?

With respect to Control, certain issues have been specified, that is, situations in which the adult is likely to exert her authority, to attempt to change the child's behavior. For example, the child is engaged in wild, noisy, disruptive behavior, or is destroying play material, or is in physical conflict with a peer. What does the Caregiver do? Does she divert, distract? Restrain physically? Does she remove the child from the situation? Punish? Denigrate? And what is the outcome? Does the child comply? Does the Caregiver persist?

Assessment of Caregiver-child Language includes such items as - does the Caregiver speak to the child? Does she converse with the child about the child's ongoing activity? Does she ask and answer questions, explain things? Does the Caregiver respond verbally to the child's behavior?

6. Finally, at the end of the day, a series of summary ratings is made. Here the observers synthesize their impressions of the entire day's transactions and make ratings of more global dimensions, such as, the Caregiver's apparent enjoyment of the child, her responsiveness to the child's social overtures, her encouragement of the child's explorations. How stimulating is the environment the Caregiver provides? How organized are the daily routines? And, for the child, how socially responsive is she or he to the Caregiver? To peers? Does the child express curiosity? How involved in activities, how task-oriented is he or she?

Each of these techniques - the CORE observations, observation of the noon meal, the physical setting and materials checklist, the assessment of Caregiver and child in learning, control and verbal interactions, as well as the summary ratings - yields information that is pertinent to describing and assessing important characteristics of the infant day care situation.

The Interview

In addition, each child's Caregiver is interviewed once a year, when the child is approximately six months old, 18 months and 30 months. (In each group Center, the Head Teacher and two others are interviewed.)

The interview takes about one hour and follows a prescribed format. Questions about the Caregiver's background (education, work experience),

her relations with her agency, her on-the-job training, her ideas on child rearing, and her relationship with the (sample) child's family. The basic format - some simple yes/no questions, some structured questions, some open-ended - is the same for all Caregivers, but some questions are tailored to the age of the child(ren) being cared for. For example, for six-month olds, we ask, "What do you think are the most important things that babies about six months of age need from you?" and, "How do you feel about it when a baby cries?" "Do you think six month olds are learning anything?" While, for the 18-month old, some parallel questions, e.g., "What do you think are the most important things that children about 18 months of age need from you?" And some questions are appropriate to the age, e.g., "Children of this age often like to have their own way about things. What do you do when they (he) say(s), "No" or refuse(s) to do what you ask?" Or, "When do you think is a good time to start toilet training?"

The interview data will provide information about the Caregivers' backgrounds, attitudes and feelings about children and child-rearing, and some of the pleasures and frustrations of the job. All of this material will help to delineate characteristics of the programs.

Data Analysis

How are we going to analyze all of these data?

A massive amount of data has been and is being collected; (we already have collected over 400 observation days). It is essential to synthesize the material so that we have a manageable number of measures. Data will be analyzed at several different levels of specificity.

At the most global level, we have devised a superordinate score we call the Infant Day Care Environment Index. This Index pools information about important aspects of the environment and what the Caregiver does.

It picks up only those aspects of the child's behavior that are assumed directly to reflect the Caregiver's actions. The IDCEI provides a composite assessment of environmental variables assumed to be related to the children's psychological development. An index such as this, which subsumes so many different measures, can only sketch patterns in broad outline; we therefore expect to analyze a number of the subscales which comprise the index. The subscales are themselves composite measures; they deal with such dimensions as the Amount and Quality of Cognitive Stimulation, Encouragement and Faciliatation of Language Development; the Caregiver's Positive Social-Emotional Interaction; Negative Social-Emotional Interaction; the Amount and Type of Control Techniques used by the Caregiver; Aspects of the Physical Setting and Play Materials.

At a third level of analysis, specific hypotheses can be tested. For example, do children in the different day care environments receive different amounts of attention from caregivers? Are there differences in the sheer amount of time the Caregivers spend playing with the children in different settings? Or, looking only at routine situations, e.g., feeding, dressing, eating - are there differences in the amount of social interaction between Caregiver and child, that is, in the extent to which the Caregiver uses the routine situation as an opportunity to provide enrichment?

At each of these levels of analysis - the global assessment, the subscales, the specific hypotheses - both longitudinal and cross-sectional comparisons can be made. That is, we can look at certain groups or subgroups of children at different times in their development, say at six months and at 18 months. Or, we can look at six month old infants in the three different situations - group care, family day care and at home with their mothers.

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In addition, certain age-related hypotheses will be tested. Although the age range of children in the sample is only two and a half years, the period covered is one of extremely rapid development, and dramatic qualitative differences in modes of relating to the world. It seems quite likely that the environmental variables which turn out to be significant for the development of children in the sensory-motor period may be different from those that relate to the development of two and three year olds, for whom language provides an increasingingly powerful tool for communication and thought.

Thus we hope to be able to offer more than a descriptive analysis of infant day care environments. We trust that the measures we are developing will be useful to others both for describing and comparing day care environments and for assessing their impact on the psychological development of young children.